Student Financial Assistance

Financial Partners Channel

Requirements Matrix and Supporting Technologies

Statement of Purpose

This document was prepared by the Supporting Technologies Document Management, Data Mart, and Common Third Party Interfacing (Middleware) teams for the Financial Partners Channel of Student Financial Assistance (SFA). It represents the results of the Analysis and Design phase of these three initiatives.

During the Analysis and Design Phase, these three teams focused on the following:

- Assessing business requirements which might best be supported by a data mart and developing a high level design for the data mart (Note: to avoid confusion in terminology, the term 'data mart' will refer to the FP Channel's use of data warehousing concepts for a specific business purpose. The term 'data warehouse' will refer to the enterprise wide version of a data warehouse.)
- Assessing the current environment of documents used within the FP Channel and determining an appropriate approach for managing these documents for the future
- Documenting existing interfaces to/from FP Channel systems and determining the future for those interfaces

Financial Partners workgroups were engaged in all Supporting Technologies activities, including Current Environment Assessment, Re-engineering Options and Analysis, and developing the recommendations through work sessions and document reviews.

The next phase, Implementation and Delivery, will focus on implementing the recommendations. Implementation steps include requirements definition, detail design, development, and testing.

- Overview
- Data Mart
- Document Management
- Middleware
- Appendix A

Overview

Student Financial Assistance

Technology will be a key enabler to supporting the business processes and functions within the FP Channel through the transformation effort. The goal of this initiative was to provide technical and functional support to assist the FP staff with improving services and products for lenders, guarantors, and state agencies. Initiatives conducted during the Analysis & Design phase include:

- **Data Mart**
  - The team conducted analysis of the business requirements and developed a high level design of the FP Channel data mart. As a result of the analysis, the team determined that the Risk Modeling initiative and the Default Management initiative will benefit from a data mart. The FP Channel should continue the momentum achieved by the data mart team by appointing a data mart owner who will work closely with the Risk Modeling team.
- **Document Management**
  - As a result of analysis of each document used within the FP Channel, the team determined that an imaging and document management system would reduce the amount of redundancy of paper and make the documents readily available. The imaging system would only be needed to get current paper-based documents for which there was no existing electronic version, into an electronic format. The document management system will also provide an orderly approach for keeping GA and Lender performance reviews and audit files. During the next phase, the team can begin developing procedures in support of a document management system.
- **Common Third Party Interfacing (Middleware)**
  - The team identified the FP Channel interfaces that occur between FP Channel systems and non-FP Channel systems. Most of the FP Channel interfaces relate to the FFEL system and as the functionality is migrated to other systems, the FFEL interfaces will change. Other interfaces may no longer be required as a result of the FP Channel data mart.

Overview

Data Mart

Document Management

Middleware

Appendix A

Data Mart
Business Context - Overview

Student Financial Assistance

The Financial Partners Channel initiated a project to determine whether or not sufficient business requirements existed that could be supported by a data mart.

- The FP Channel desired to address some challenges existing in the current environment:
  - Same data residing in multiple systems but the data is inconsistent between systems
  - Searching multiple data sources (e.g. FFEL, PEPS, FMS, NSLDS, etc.) for comparative and reconciliation information
  - Searching multiple data sources, including system manuals, to satisfy internal and external inquiries
  - Report generation based on an inflexible, costly, and time-consuming process requiring human intervention to create data extracts for reports and other decision support information
  - Report generation based on non-standardized data and metrics revealing inconsistent results
  - Growing sense of urgency within the SFA business community for reliable, cost effective and flexible access to decision support information with a centralized reporting capability
  - Producing accurate data in a standardized manner

Data Mart
Business Context - Overview - continued

Student Financial Assistance

- This project identified and reviewed requirements from the following areas to determine which areas may benefit from a data mart.
  - Financial Management is responsible for ensuring that lenders' and guaranty agencies' payments are timely and accurate.
  - Partner Services is responsible for identifying and analyzing major issues affecting lender and guarantor financial stability, and for the implementation of program and financial reviews of guaranty agencies and lenders on the proper administration and management of the Title IV programs.
  - State Agency Liaison is responsible for providing support and communications to state agencies to ensure a network of effective and satisfied state agency partners.
  - Program Development is responsible for maintaining a network of effective and satisfied lenders and guaranty agencies.
  - Partner Systems Liaison is responsible for providing contract management-related activities to support the ongoing maintenance and operations of the Federal Family Education Loan System (FFEL), and performing the following functions related to the Financial Partners Channel.
    - Work with vendors to lower the costs associated with FFEL processing
    - Keep informed of emerging technologies and business process innovations and analyze their potential for streamlining Financial Partners operations
    - Continually evaluate business processes for service improvement and cost reduction opportunities

Data Mart
Business Context - Relationship to Other Initiatives

This initiative coincided with several other initiatives within the FP Channel. Some of these other initiatives focused on business requirements which may have an impact on the data mart initiative.

- The Risk Modeling initiative focused on assessing and recommending a solution(s) that will improve the risk modeling function.
- The Process Re-engineering initiative focused on simplifying several core processes.
- Forms 2000 focused on moving functionality supporting the GAs from the FFEL system to the FMS system.
- The Default Reduction initiative focused on assessing and recommending opportunities to improve the default reduction process.

Data Mart
Business Context - Scope

Student Financial Assistance

During initial discussions with representatives from other initiatives, it appeared that a data mart could be used to support the business requirements of some of these initiatives.

- The Risk Modeling initiative
  - Information from several systems (e.g. NSLDS, FFEL, FMS, PEPS) is required to determine a risk scorecard for the external partners. Data from some systems (e.g. NSLDS) needs to be summarized and filtered prior to comparing it with data from another system (e.g. FFEL, FMS).
- The Process Re-engineering initiative
  - The business case focused on several processes that may benefit from a data mart:
    - A streamlined Performance Review process to efficiently monitor Financial Partners compliance and performance by reducing duplicate efforts and gaps and by providing automated tracking tools for performance indicators and review results
- Default Prevention and Reduction initiative
  - Default management initiatives focused on several areas that could be supported by a data mart:
    - Calculating a student loan lifetime loss rate (net of all eventual collections)
    - Analyzing portfolio characteristics and portfolio valuation models for potential lease or sale options
    - Selecting loans for write-off on a routine basis, using parameter-driven criteria

Data Mart
Business Context - Scope - continued

Student Financial Assistance

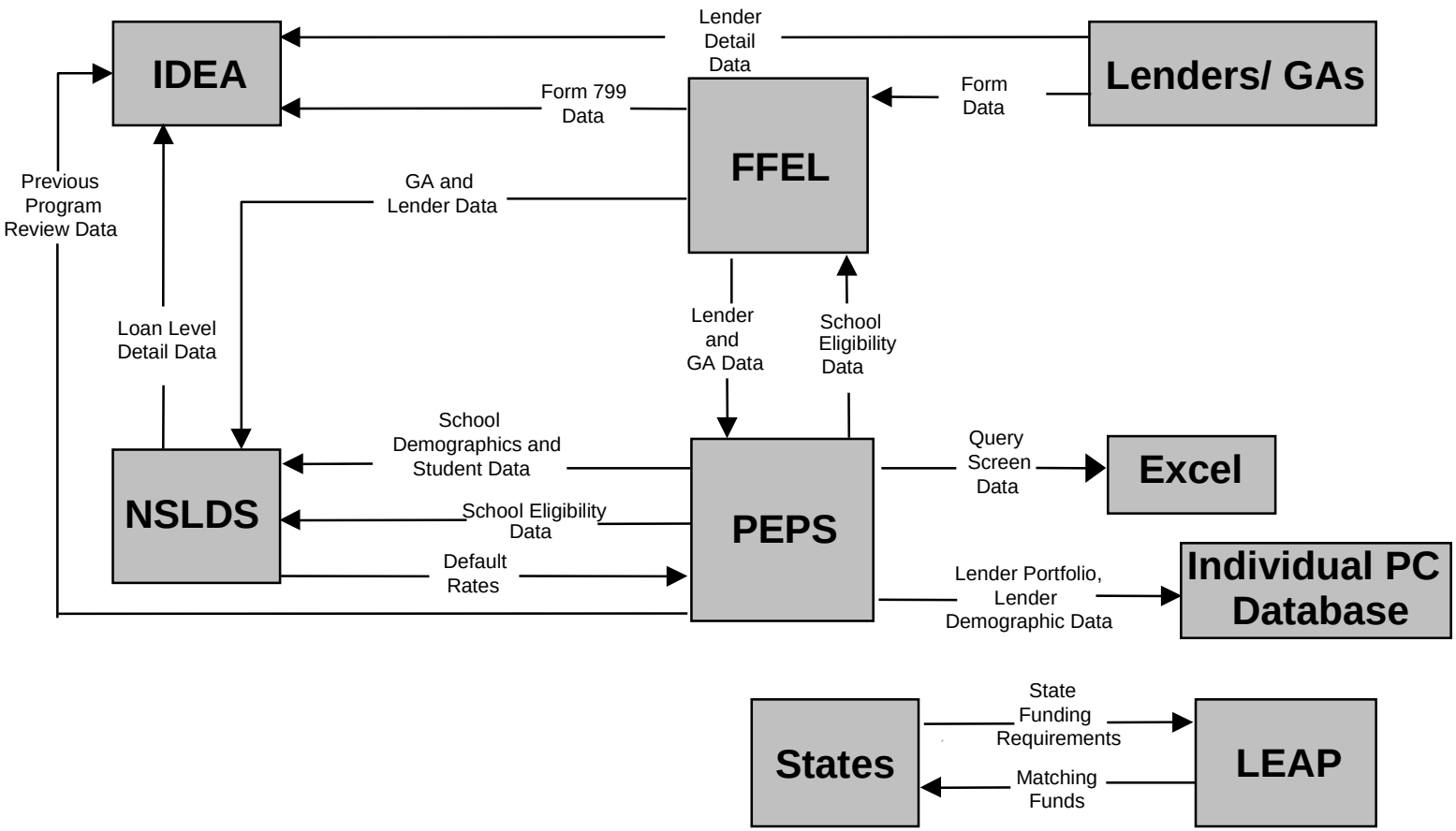
After additional discussions with representatives and considering the timing and expected benefits of the FP Channel's other initiatives, a phased approach to identifying requirements for a data mart was determined to be the most appropriate for the FP Channel.

- The scope of the first phase may support:
  - Risk Modeling for the GAs
- The scope of future phases may support
  - Risk Modeling for the Lenders and the Servicers
  - Process Re-engineering - Streamlined Review Process
  - Default Management

Data Mart
Current Environment - Overview

Student Financial Assistance

The Channel utilizes several major and ancillary Financial Partners systems as well as several other channel major and ancillary systems in order to support its business functions.



Federal Family Education Loan (FFEL) (Owner: FP Channel)

- The FFEL system has four major components. One of the components is the Debt Management Collection System (DMCS). This component is the responsibility of the Students Channel and is not discussed here. The functions of the remaining three components are below.

- The Lender and School System supports the calculation of interest benefits and special allowance requests submitted by participating lenders. This system also supports the processing of Federal Claims and Loan Assignments. Key functions of the system include:
  - Receipt and processing of FISL Claims
  - Receipt and processing of Rehabilitation/Consolidation Claims
  - Receipt and processing of NDSL Loans
  - Receipt and processing of *Lender's Interest and Special Allowance Request and Report* (ED 799)
  - Maintenance of school data bases for FFEL, NDSL and PELL debt processing
  - Maintenance of lender data base
  - NSLDS Lender Data Submission

Data Mart
Current Environment - FFEL - continued

- The Guaranty Agency System supports collection and processing of guaranty agency portfolio data. Key functions provided by this system include:
  - Receipt and processing of *GA Claims and Collections Report* (ED 1189)
  - Receipt and processing of *GA Quarterly/Annual Report* (ED1130)
  - Calculation of administrative cost allowance and reinsurance fees
  - Management reporting
- The Support and Maintenance System comprises the various Project level support and maintenance programs and activities such as accounting interface for FFEL financial reporting to the Department's financial ledger system, Quality Control, Management Reports and Invoicing. Key functions of the system include:
  - Accounting and reconciliation of FFEL financial transactions (DMCS, Interest Payments, Guaranty Agency, etc.)
  - Accounting and reconciliation for FFEL funding
  - Management of security administration and user profiles
  - Management and Operations reporting
  - Collection of processing statistics for invoicing
  - Collection of quality control statistics for contract performance evaluation

Data Mart
Current Environment - IDEA

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Interactive Data Extraction and Analysis (IDEA) (Owner: FP Channel)

- IDEA is an audit software program which combines database and spreadsheet functionality to import data from external sources (Financial Partner systems, partners, etc.) and performs numerous types of analysis. Data can be linked directly from systems or imported directly into the program. It has a comprehensive history and notes feature that is part of any data file that is created. A broad summary of its capabilities include:
  - Import data from a wide range of data formats
  - Perform analysis of data including comprehensive statistics, field summarization, file stratification, aging, charting, etc...
  - Conduct exception tests in various ways
  - Test for gaps in sequences, duplicate items, etc.
  - Select samples in several different formats
  - Compare and join data files for testing
- The software is used primarily in the regional offices to automate the review process and provide varied analytical tools to evaluate ED799, 1189, 1130, NSLDS, PEPS etc. Similar data is also obtained from our partners to compare to ED data. IDEA provides capability for Regional personnel to perform "desk review" procedures whereby regional personnel request selected data from partners for in-house review.

Data Mart
Current Environment - LEAP/SLEAP

**Leveraging Educational Assistance Partnership (LEAP)/
Special Leveraging Educational Assistance Partnership (SLEAP) (Owner: FP Channel**

- LEAP makes federal funds available to states to encourage state educational student assistance programs for students with “substantial financial need.” This assistance can be in the form of grants or community service work-study employment. LEAP programs are operational in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands.
- The application is used primarily to review and approve applications for participation in the LEAP program, calculate allocation based on LEAPP allotment amount, make LEAPP awards, receive and process unused funds, and evaluate LEAP Program Performance Reports.
- SLEAP is an addition to the LEAP Program as a result of the 1998 Amendments to the Higher Education Act of 1965. However, no application currently exists to support the SLEAP program.

Data Mart
Current Environment - Individually Maintained PC "Databases"

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Several databases and Excel spreadsheets are used on a regular basis to support the efforts of personnel within the FP Channel. (Owner: FP Channel)

- A dBase system uses data from FFEL to maintain the Audit Tracking System and produces such statistics as for the top 100 lenders - original loans, and the top 100 lenders - outstanding balances. This dBase system has functionality not currently supported by PEPS.

- Several Microsoft Excel spreadsheets use data extracted from PEPS query screens. Extracts are created and loaded into the spreadsheets because the PEPS query screens do not have record sorting capability. Once in Excel, the data is sorted and used for reference purposes.

Data Mart
Current Environment - NSLDS

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National Student Loan Data System (NSLDS) (Owner: CIO)

- NSLDS is a national database of loan and grant-level data on the majority of Title IV programs. It was intended to provide a consolidated research database as well as support operational functions of the agency and Title IV participants. The scope of the NSLDS has been broadened over time to include certain reasonability and adjunct accounting process validations. Its functionality extends to a broad base user community that accesses data through a query management facility and defined reporting structures.

- NSLDS was designed with the intent to perform various loan administration functions.
  - Student eligibility Prescreening for Title IV Aid Programs
  - Student eligibility Post-screening for Title IV Aid Programs
  - Aid Overpayment recordation
  - Eligibility of school participants in Title IV Aid programs
  - Cohort Default Rate Calculations
  - Enrollment reporting through SSCR Standardization
  - Preparation of Financial Aid Transcript (FAT) Information
  - Borrower tracking for attendance, eligibility, status, and aid thresholds
  - Demographics

Data Mart
Current Environment - NSLDS - continued

- NSLDS was designed with the intent to perform the following operational support functions:
  - Audit and Program Review Planning
  - Research Studies and Policy Development
  - Budget Analysis and Development
  - Loan Transfer Tracking
  - Monitoring GA and Lender Billing for Reasonability
  - Assessment of FFELP, FDLP, and Other Program Administration
  - Borrower Tracking for attendance, eligibility, status, and aid thresholds
  - Credit Reform Act Support
  - Refund and Loan Cancellation Support

- The FP Channel mainly uses NSLDS for reasonability checks for billing and in support of the external partner performance reviews and audits.

Data Mart
Current Environment - PEPS

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Post Secondary Education Participants System (PEPS) (Owner: Schools Channel)

- Designed to provide a management information system with consistent and reliable data, and flexible reporting concerning post-secondary institutions, accrediting bodies, state licensing agencies, lenders, and guarantors, for a large number of users with diverse business needs. The primary functions include:
  - Provide data on school participation: eligibility, certification, address, and program participation
  - Provide institutional reviewer data
  - Support annual default rate calculation for FFEL and Direct Loan schools
  - Log hardware/software problem calls from PEPS users and forwards them to the appropriate area of response
  - Provide audit data on schools, lenders, and guaranty agencies (including interface to Dept. of ED OCFO)
  - Run SQL queries for the SFA community (internal and external)
  - Monitor and record GA and lender servicer participation and default rates
  - Use Federal School Code File to look up school codes for FAFSA completion

- The FP Channel uses PEPS to support its performance reviews and audits of the GAs, Lenders, and Servicers.

Data Mart
Improvement Opportunities

Student Financial Assistance

A comparative analysis between industry best practices and the FP Channel current practices was conducted to identify opportunities where a data mart may improve the process.

The ranking symbol below indicates the degree to which current FP Channel practices are consistent with industry best practices.

= Current FP Channel practices are consistent with the best practice standard with opportunities for enhancements to fully utilize the capability.

= Current FP Channel practices partially meet the best practice standard with opportunities for improvement in the area.

= Current FP Channel practices are not consistent with best practice standard with major opportunities for improvement in that area.

In summarizing the detailed comparisons, the FP Channel can benefit significantly from developing and implementing a standardized, single source decision support platform that provides a consistent and valid basis for supporting risk modeling.

Data Mart
Improvement Opportunities - continued

Student Financial Assistance

Best Practice	Current FPC Practice	Ranking	Opportunity
Data mart should be integrated with an organization's planning process so that it can evolve with the business, adapting to changing information needs and supporting new strategies	There is a very lengthy and costly process to implementing changes in information requirements (canned reports)	◒	Design and implement a data mart when new or improved business processes which rely upon decision support are identified (such as risk modeling)
Implementation of a data mart should utilize a phased approach, initially delivering quick wins and delivering continuously to build credibility and deliver valuable business functionality	The FP Channel has several initiatives underway to identify business requirements. However, in support of existing processes, the FP Channel developed PC databases and Excel spreadsheets to support specific needs.	○	Implement the functionality identified for risk modeling, analyze the effectiveness, and tune the system before implementing functionality identified for potential subsequent phases

Key:

- ● *Current FP Channel practices correspond with best practices*
- ◒ *Current FP Channel practices partially follow best practices*
- ○ *Current FP Channel practices do not correspond with best practices*

Data Mart
Improvement Opportunities - continued

Student Financial Assistance

Best Practice	Current FPC Practice	Ranking	Opportunity
When creating a data mart, maintain consistency of purpose in order to meet expectations – the kind of decision-making that will be supported by the data mart needs to be specified up front. The data mart should focus on a specific functional business need rather than technology	The FP Channel is in the process of documenting requirements for a data mart to specifically address risk modeling requirements. Requirements are being stressed rather than any particular technology solution	◒	Implement the functionality identified for risk modeling, analyze the effectiveness, and tune the system before implementing functionality identified for potential subsequent phases
Users should be trained to effectively use the data mart by understanding the data content and how to use the access tools. In addition, the users should have access to follow-on training.	The FP Channel users are not trained on how to utilize the data contained in the systems. Expertise is gained through years of experience and most of that expertise is shared among a limited number of key users (SMEs)	○	Initial and recurring training opportunities for FP Channel users on the data mart will more widely distribute expertise throughout the organization and maximize the use of the data mart contents
A data mart owner should be appointed. This person will make decisions about rules to transform the data.	No data mart owner has been identified	○	Assign a FP Channel analyst with knowledge of the business area that will be supported by the data mart.

Key:
- ● *Current FP Channel practices correspond with best practices*
- ◒ *Current FP Channel practices partially follow best practices*
- ○ *Current FP Channel practices do not correspond with best practices*

Data Mart
Functional Requirements - Approach

Student Financial Assistance

In order to document the functional requirements, knowledgeable personnel from the different functional areas were identified and a common approach was followed.

- The approach to collect the functional requirements involved:
  - Identifying a subject matter expert (SME) from each area and having them participate on the team
  - Conducting high level interviews to determine areas that might benefit from a data mart
  - Conducting meetings to collect detailed information on the areas that will benefit from a data mart
  - Leveraging knowledge from the FP Channel's other initiatives (e.g.: Risk Modeling)
  - Identifying data sources and the associated data elements in support of the Risk Model
  - Verifying and validating the information with other team members
  - Identifying "best in business" processes and practices
- The areas reviewed within FPC and their subject matter expert liaisons included:
  - Partner Services — Nettie Harding/Paul Sullivan/Greg Senseney
  - Financial Management — Tony Magro
  - State Agency Liaison — Greg Gerrans
  - Program Development — Jack Reynolds
  - Partner System Liaison — Courtland Smith

Data Mart
Functional Requirements - Summary

Student Financial Assistance

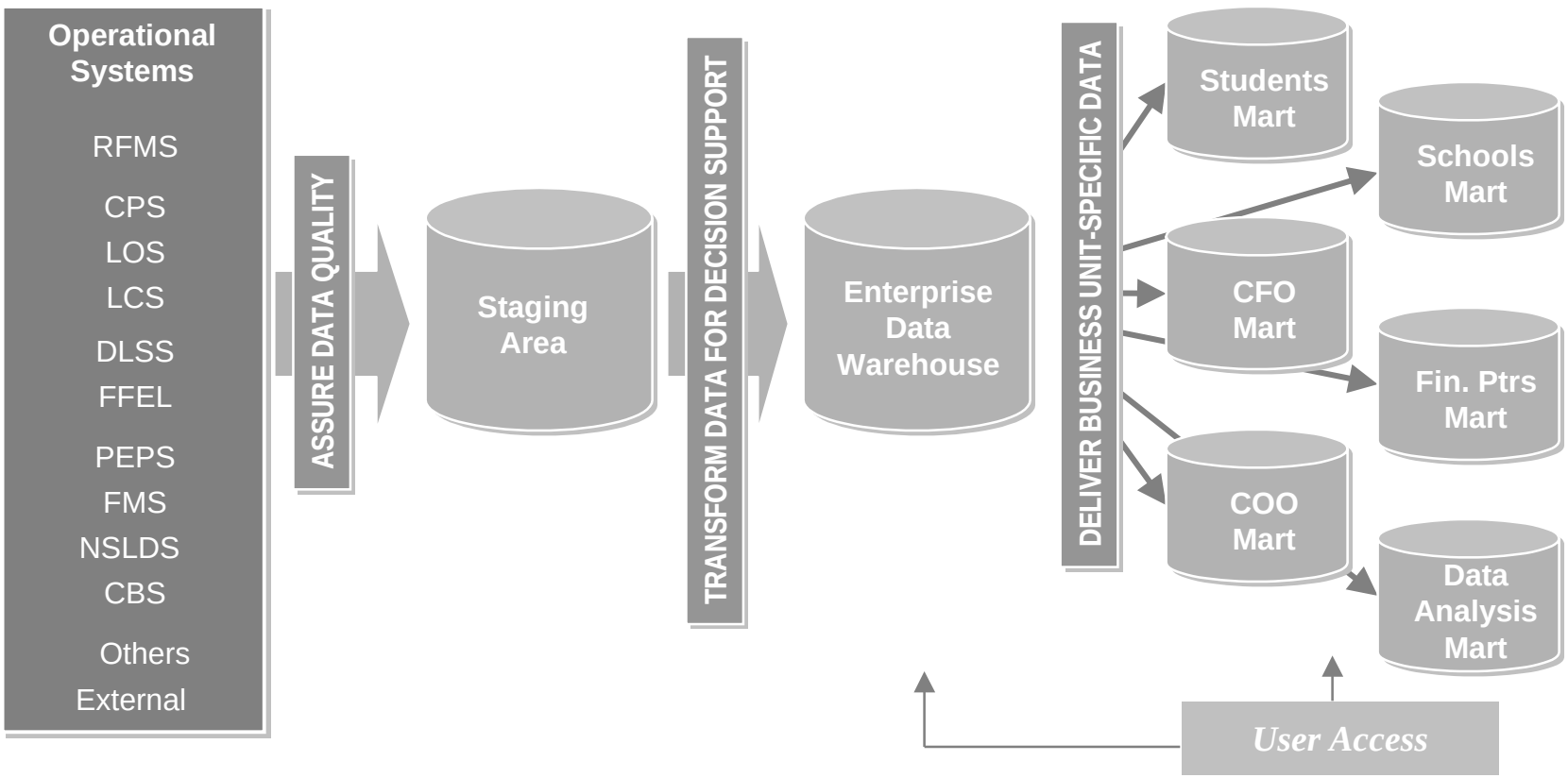
The first phase of the data mart will support the Risk Modeling function for the GAs. The Risk Modeling Initiative identified several Key Performance Indicators (KPIs) that related to risk. For additional functional information related to the KPIs, please reference the Risk Modeling Conceptual Design document.

- Risk Model Key Performance Indicators
  - Change in federal funds
  - Federal fund vs. reserve fund
  - Change in restricted funds
  - Rate of reinsurance
  - Change in operating funds
  - Change in organizational structure
  - Portfolio characteristics
  - Complaints
  - Change in default rate
  - Number of complaints
  - Trend analysis of rejected claims
  - Claims payment - history
  - Claims payment - Age
  - Program review/audit finding
  - Change in error rates

Data Mart
Conceptual Model - Enterprise Wide

Student Financial Assistance

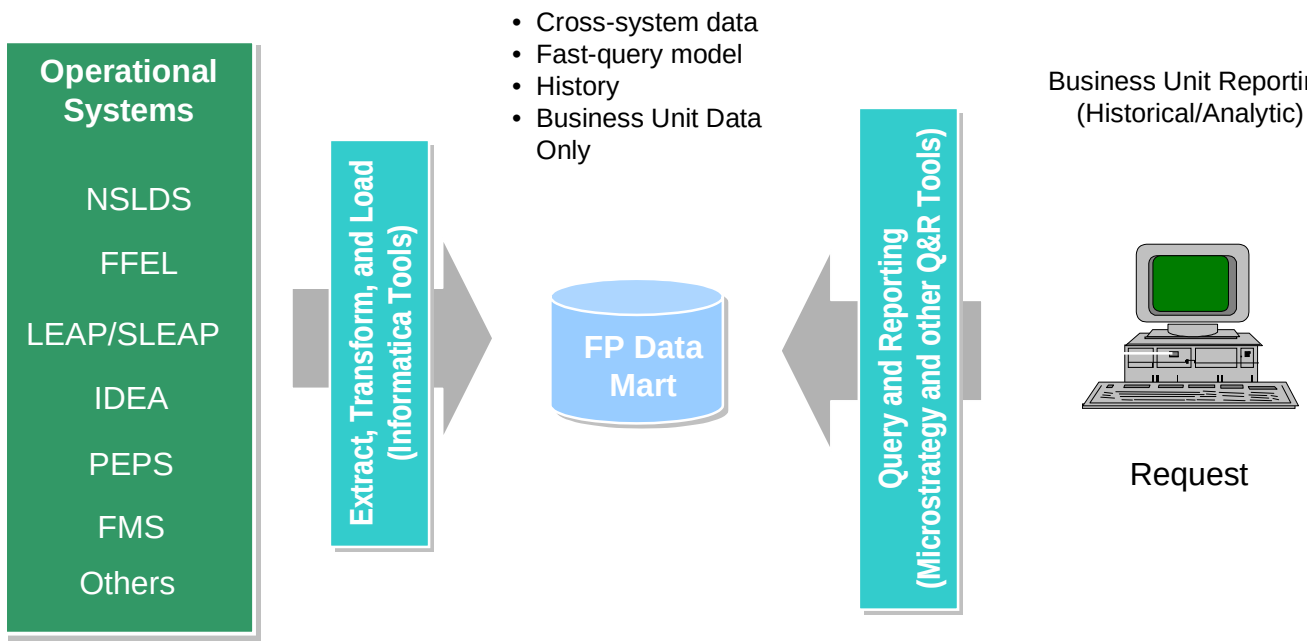
The Enterprise Wide conceptual model supports channel specific data marts.



Data Mart
Conceptual Model - FP Channel

Student Financial Assistance

Implementing an Enterprise Wide data warehouse will require a significant amount of time and effort especially as it relates to coordination within SFA. A data mart does not require this level of coordination. The FP Channel's conceptual model is similar to the Enterprise Wide model except that the data mart receives information from the source systems instead of receiving it from the Enterprise Wide data warehouse.



Data Mart
Conceptual Model - Data Model

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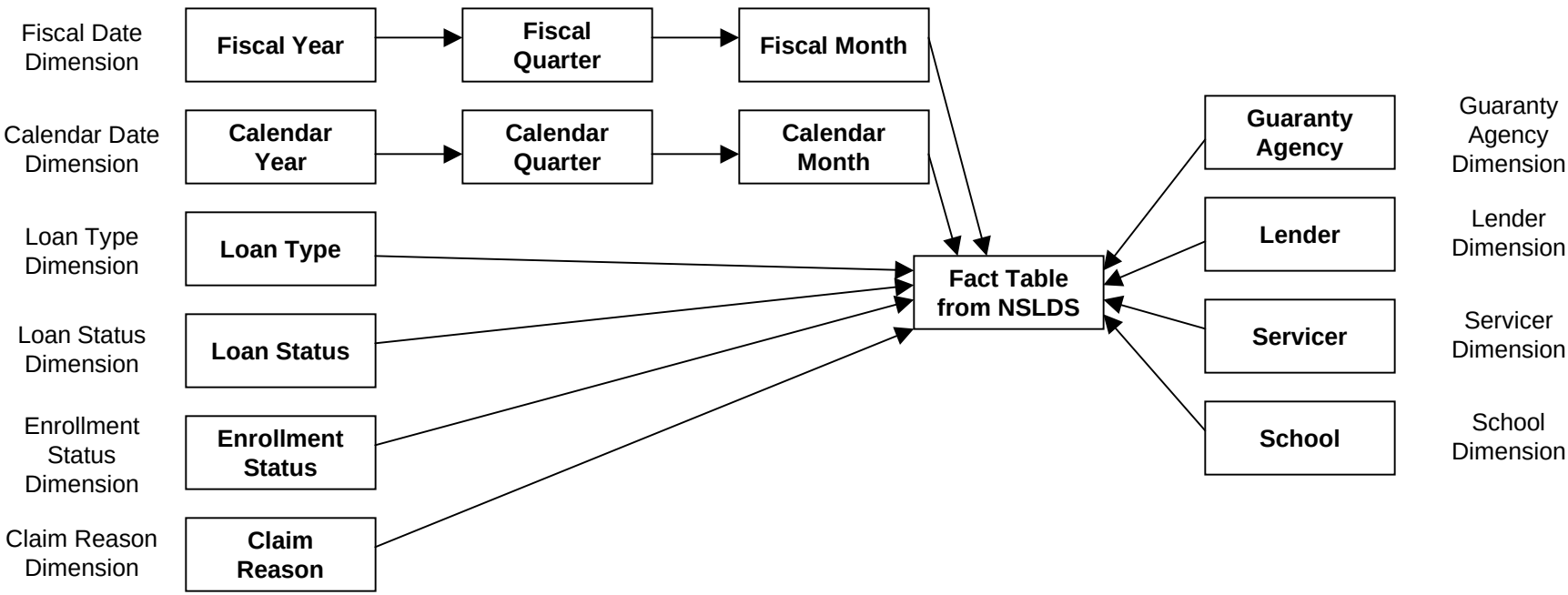
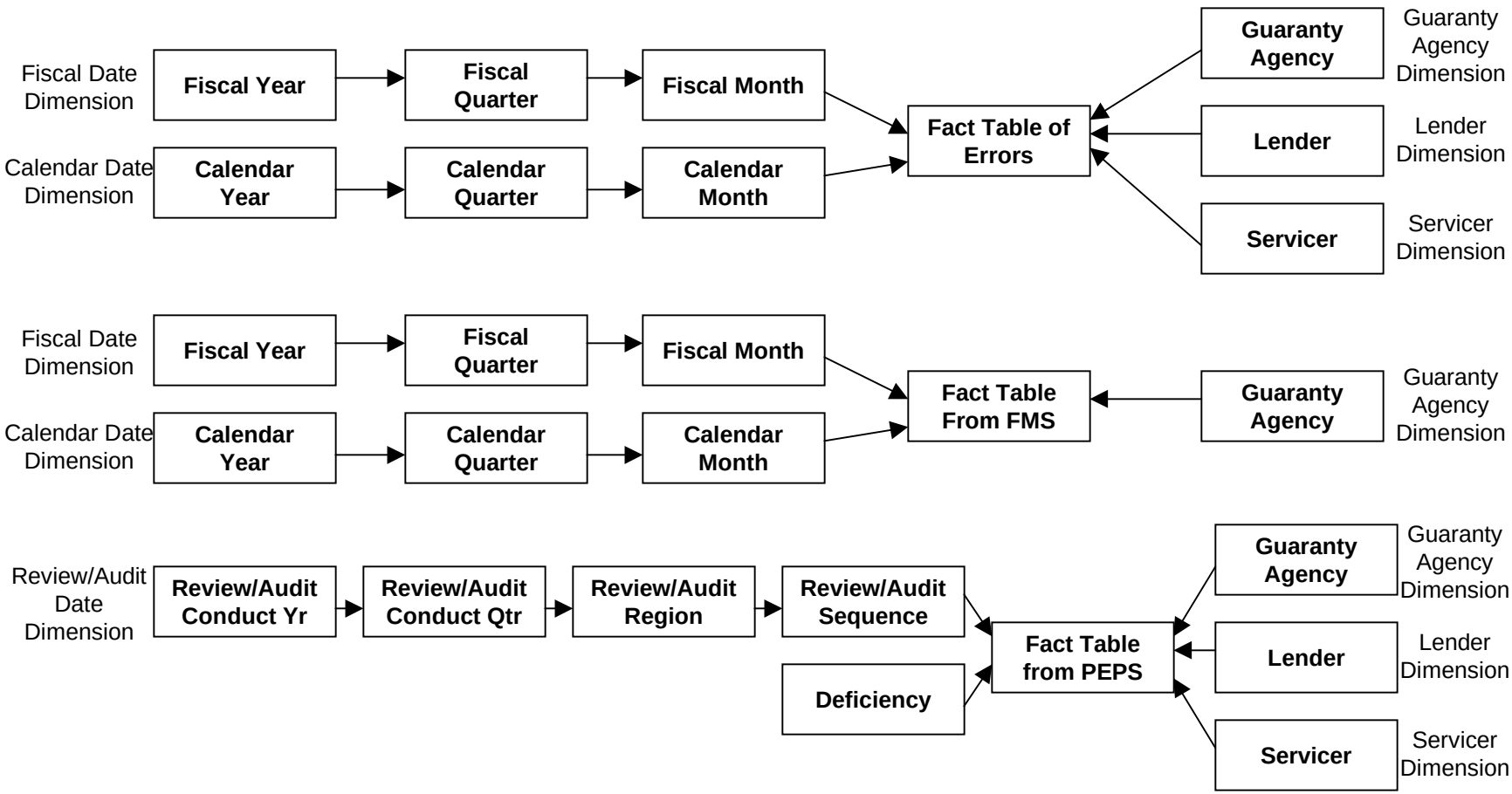
Based upon the functional requirements, a high level conceptual data model may be developed to support the risk modeling functionality. For detailed information on the business requirements, please reference the Risk Modeling Conceptual Design document. Some data documented in this conceptual design are currently not available from existing SFA systems.



Conceptual data model continued



Data Mart
Conceptual Model - Data Model - continued

Detailed information regarding the dimensions identified on the previous slides was derived from the available data sources.

#	Dimension	For Fact Table	Description	Hierarchy	Attributes
1	Fiscal Date	NSLDS	The fiscal date when the loan level detail was captured on the NSLDS system	• Fiscal Year • Fiscal Quarter • Fiscal Month	• Fiscal Year • Fiscal Quarter • Fiscal Month
2	Calendar Date	NSLDS	The calendar date when the loan level detail was captured on the NSLDS system	• Calendar Year • Calendar Quarter • Calendar Month	• Calendar Year • Calendar Quarter • Calendar Month
3	Loan Type	NSLDS	The type of loan	None	• Loan Type Code • Loan Type Description
4	Loan Status	NSLDS	The current status of the loan	None	• Loan Status Code • Loan Status Description
5	Enrollment Status	NSLDS	The current enrollment status of the borrower	None	• Enrollment Status Code • Enrollment Status Description
6	Claim Reason	NSLDS	The reason that a claim was filed	None	• Claim Reason Code • Claim Reason Description
7	Guaranty Agency	NSLDS	The Guaranty Agency that currently holds the loan	None	• Guaranty Agency Code • Guaranty Agency Name

Data Mart
Conceptual Model - Data Model - continued

Student Financial Assistance

#	Dimension	For Fact Table	Description	Hierarchy	Attributes
8	Lender	NSLDS	The Lender that currently holds the loan	None	• Lender ID • Lender Name
9	Servicer	NSLDS	The Servicer that currently services the loan (if applicable)	None	• Servicer Code • Servicer Name
10	School	NSLDS	The current school in which the borrower is enrolled or the last school from which the borrower attended	None	• School Code • School Name
11	Fiscal Date	Errors	The fiscal date when the errors were detected when loading the loan level detail onto the NSLDS system	• Fiscal Year • Fiscal Quarter • Fiscal Month	• Fiscal Year • Fiscal Quarter • Fiscal Month
12	Calendar Date	Errors	The calendar date when the errors were detected when loading the loan level detail onto the NSLDS system	• Calendar Year • Calendar Quarter • Calendar Month	• Calendar Year • Calendar Quarter • Calendar Month
13	Guaranty Agency	Errors	The Guaranty Agency that currently holds the loan	None	• Guaranty Agency Code • Guaranty Agency Name
14	Lender	Errors	The Lender that currently holds the loan	None	• Lender ID • Lender Name
15	Servicer	Errors	The Servicer that currently services the loan (if applicable)	None	• Servicer Code • Servicer Name
16	Fiscal Date	FMS	The fiscal date for which the Form 2000 applies	• Fiscal Year • Fiscal Quarter • Fiscal Month	• Fiscal Year • Fiscal Quarter • Fiscal Month

Data Mart
Conceptual Model - Data Model - continued

Student Financial Assistance

#	Dimension	For Fact Table	Description	Hierarchy	Attributes
17	Calendar Date	FMS	The calendar date for which the Form 2000 applies	• Calendar Year • Calendar Quarter • Calendar Month	• Calendar Year • Calendar Quarter • Calendar Month
18	Guaranty Agency	FMS	The Guaranty Agency that submitted the Form 2000	None	• Guaranty Agency Code • Guaranty Agency Name
19	Review/ Audit Date	PEPS	The start date on which the review/audit was conducted	• Review/Audit Year • Review/Audit Quarter • Region Code • Sequence Number	• Review/Audit Year • Review/Audit Quarter • Region Code • Sequence Number
20	Guaranty Agency	PEPS	The Guaranty Agency on which the review/audit was conducted	None	• Guaranty Agency Code • Guaranty Agency Name
21	Lender	PEPS	The Lender on which the review/ audit was conducted	None	• Lender ID • Lender Name
22	Servicer	PEPS	The Servicer on which the review/ audit was conducted	None	• Servicer Code • Servicer Name
23	Deficiency	PEPS	The deficiency that was found during the review/audit	None	• Deficiency Code

Data Mart
Conceptual Model - Data Model - continued

Student Financial Assistance

Detailed information regarding the fact tables identified on the previous slides is documented below.

NSLDS Fact Table	
Facts	Amount of Guaranty
	Amount of Cancelation
	Amount of Claim Paid to Lender
	Amount of Loans Transferred In
	Amount of Loans Transferred Out
	Outstanding Principal Balance
	Amount Deferred Prior to Repayment
Foreign Keys	Fiscal Date
	Calendar Date
	Loan Type
	Loan Status
	Enrollment Status
	Claim Reason
	Guaranty Agency
	Lender
	Servicer
	School

Data Mart
Conceptual Model - Data Model - continued

Student Financial Assistance

FMS Fact Table	
Facts	Federal Fund Ending Balance
	Claims Paid – Amount Due to/(from) Guarantor
	Operating Fund Ending Balance
	Operating Fund Beginning Balance
	Restricted Account Ending Balance
	Restricted Account Beginning Balance
	Loans Guaranteed (Except Federal Consolidation)
	All Loans Canceled (Except Federal Consolidation)
	Federal Consolidation Loans Guaranteed
	Federal Consolidation All Loans Canceled
	Uninsured Loans
	Loans Transferred In
	Loans Transferred Out
	Default Claims Paid
	Bankruptcy Claims Paid
	Death and Disability Claims Paid
	Closed School/False Certification Claims Paid
	Loans Paid in Full
	Federal Stafford and Unsubsidized Stafford Interim Loans
	Total Loans in Deferment Prior to First Payment
	Default Collections – Total Collected Principal
	Ending Balance on Defaulted Loans
	Amount not Delinquent
	Delinquency by Debt 1-90 Days
	Delinquency by Debt 91-180 Days
	Delinquency by Debt 181-365 Days
	Delinquency by Debt 1-2 Years
	Delinquency by Debt 2-6 Years
	Delinquency by Debt 6-10 Years
	Delinquency by Debt Over 10 Years
Foreign Keys	Fiscal Date
	Calendar Date
	Guaranty Agency

Data Mart
Conceptual Model - Data Model - continued

Student Financial Assistance

PEPS Fact Table	
Facts	Review/Audit Period Start Date
	Review/Audit Period End Date
	Amount of Liability
	Amount of Underpayment
Foreign Keys	Review/Audit Date
	Guaranty Agency
	Lender
	Servicer
	Deficiency

Error Fact Table	
Facts	Number of Errors
	Number of Total Records
Foreign Keys	Fiscal Date
	Calendar Date
	Guaranty Agency
	Lender
	Servicer

Data Mart
Technical Requirements - Overall

Student Financial Assistance

Additional technical requirements in support of the FP Channel data mart must be considered.

- Frequency of updates
  - The majority of the data to support the risk model will be extracted on either a quarter or annual basis.
- Hardware space requirements
  - A CIO enterprise storage strategy is currently being developed that will support data warehouse and other projects. That strategy will include Storage Area Network (SAN) type architecture within the VDC.
- Software requirements
  - All personnel who need to create ad hoc reports will require access to the MicroStrategy tool. Those users who only need to execute “canned” reports may use the web interface for MicroStrategy and do no require direct access to the tool.
- Ability to modify design to accommodate future functional requirements
  - The technical design of the data model should allow flexibility for additional functionality as long as the new requirements relate to the original intent of the data mart.
- Migration to Enterprise Wide data warehouse
  - The ultimate goal will be for the data mart to receive its data from the Enterprise Wide Data Warehouse and not from the individual operational systems. Maintaining common architectures between the Enterprise Wide Data Warehouse and the FP Channel data mart will assist in the migration effort.

Data Mart
Technical Requirements - Platform and Tools

Student Financial Assistance

The CIO organization (Enterprise IT Management) performed a detailed product selection task and set some initial standards on platforms and tools to support data warehouses and data marts (according to TO 4). Ongoing discussions continue related to the list of platforms and tools.

- Initially selected Technical Environment
  - Oracle 8i - a Relational Database Management System
  - Informatica - an extract, transform, and load (ETL) tool that enables efficient data acquisition from various sources
  - MicroStrategy - an end user access tool that will allow relational online analytic processing (ROLAP)
  - Oracle Express - an end user access tool that will allow for multi-dimensional online analytic processing (MOLAP)
  - Sun (UNIX) - to support Informatica
  - HP (UNIX) - to support Oracle 8i
  - Windows NT - to support MicroStrategy

- The FP Channel will continue to work with the CIO and will use products that are both approved by CIO and that will support the requirements of the Channel.

Data Mart
Technical Requirements - Training and Access

Student Financial Assistance

In order to effectively use any new system or approach, the personnel using that system must receive appropriate training.

- Data residing in the data mart
  - All users of the data mart should have a thorough understanding of the information contained within the data mart. This will provide them with a better understanding of the reports and query results.
- Training to use MicroStrategy
  - There are many features of this tool. The most widely used features will probably be creating or running canned reports and ad hoc queries.
  - To support the risk modeling functionality, personnel in the Oversight & Analysis group will need to receive training.
  - Implementation of later phases of the data mart will require most personnel in the Partner Services area in addition to representatives from the external partners to receive training. The external partners will only receive training on how to use the web interface of the tool.
- Access to the data mart
  - Personnel within the Partner Services area should have access to the data as long as they have received training to use the MicroStrategy tools.
  - In later phases, the external partners should have access to the information that is necessary to execute the canned reports.

Data Mart
Implementation Strategy - Benefits

Student Financial Assistance

Adopting a phased approach and focusing on addressing specific business functions will allow the FP Channel to recognize substantial benefits from the data mart earlier than waiting for an Enterprise Wide data warehouse. Expected benefits from Phase 1 include the following.

- Improved Customer Satisfaction
  - Ability for Financial Partners to directly access data pertaining to them, e.g., review findings, cohort default rates, performance ratings of potential Servicers, etc...
  - Ability to track review results by types of findings in order to respond more proactively to Financial Partners' questions, policy issues, and potential areas for technical assistance
- Reduced Unit Cost
  - Eliminate the need for multiple systems in order to access data
  - Increase efficiency of creating statistical analysis reports, both routine and ad hoc
- Improved Employee Satisfaction
  - Ability for the SFA Oversight and Analysis Group to implement enhanced monitoring of Financial Partners, using the risk model and statistical analysis tools (e.g., MicroStrategy)
  - Ability for SFA Oversight and Analysis Group to have easy access to GA, Lender and Servicer data for pre-planning and review processes

Data Mart
Implementation Strategy - Next Steps

Student Financial Assistance

There are several steps that the FP Channel can implement to continue the progress of the FP Channel data mart initiative.

- Continue with the Build and Test phase of the data mart to support the Risk Model for Guaranty Agencies
- Maintain close contact with the Risk Modeling team to continue to support their requirements
- Assign a Data Mart owner
- Document and maintain a list of *potential future functionality* that may be supported by the data mart

Overview

Data Mart

Document Management

Middleware

Appendix A

Document Management
Business Context - Overview

Student Financial Assistance

The Financial Partners Channel initiated a project to identify requirements related to imaging and document management. The goal of the project was to determine whether or not the FP Channel would benefit from an imaging and document management system.

- In initiating this project, the FP Channel desired to address some challenges existing in the current environment:
  - Locating all appropriate documentation in a document intensive environment when researching an issue or question
  - Searching a large paper based document for relevant information
  - Accessing electronic documents residing in numerous locations and on various media
  - Accessing documents in a timely manner

- This project addressed the requirements from the following areas:
  - Financial Management
  - Partner Services
  - State Agency Liaison
  - Program Development
  - Partner Systems Liaison

Document Management
Business Context - Definitions

Student Financial Assistance

This project introduced several terms that were new to team members. Therefore, prior to establishing the scope of this project, the team developed working definitions for these new terms.

- **Document** - Items such as traditional office automation files including Microsoft Office files, emerging document types such as video, voice, and image, and structured documents such as database tables and news streams.
- **Imaging** - The process of electronically capturing and reproducing paper-based information to support or trigger specific business events or tasks.
- **Document Management** - The ability to provide services for storing documents and information about those documents in addition to providing access and version control, retrieval services, and viewing facilities for the information.
- **Workflow** - The action of electronically modeling an entire business process which can then be coordinated, monitored, and revised to improve productivity.

Document Management
Business Context - Phased Approach

Student Financial Assistance

Given the current disparate environment for controlling documents and the potentially complex nature of automated workflow, a phased approach to identifying requirements was determined to be the most appropriate for the FP Channel.

- The scope for the first phase included several key characteristics
  - Document creation and responsibility
    - Created by the FP Channel, but this does not include reports generated from a system.
    - Received by the FP Channel from outside SFA, but relates to specific Financial Partners (this does not include legislation).
    - Responsible for keeping the official copy of a document
  - Access frequency
    - Frequently accessed
    - Non-frequently accessed but those that are needed immediately when requested
  - Document media
    - Paper based
    - Electronic based

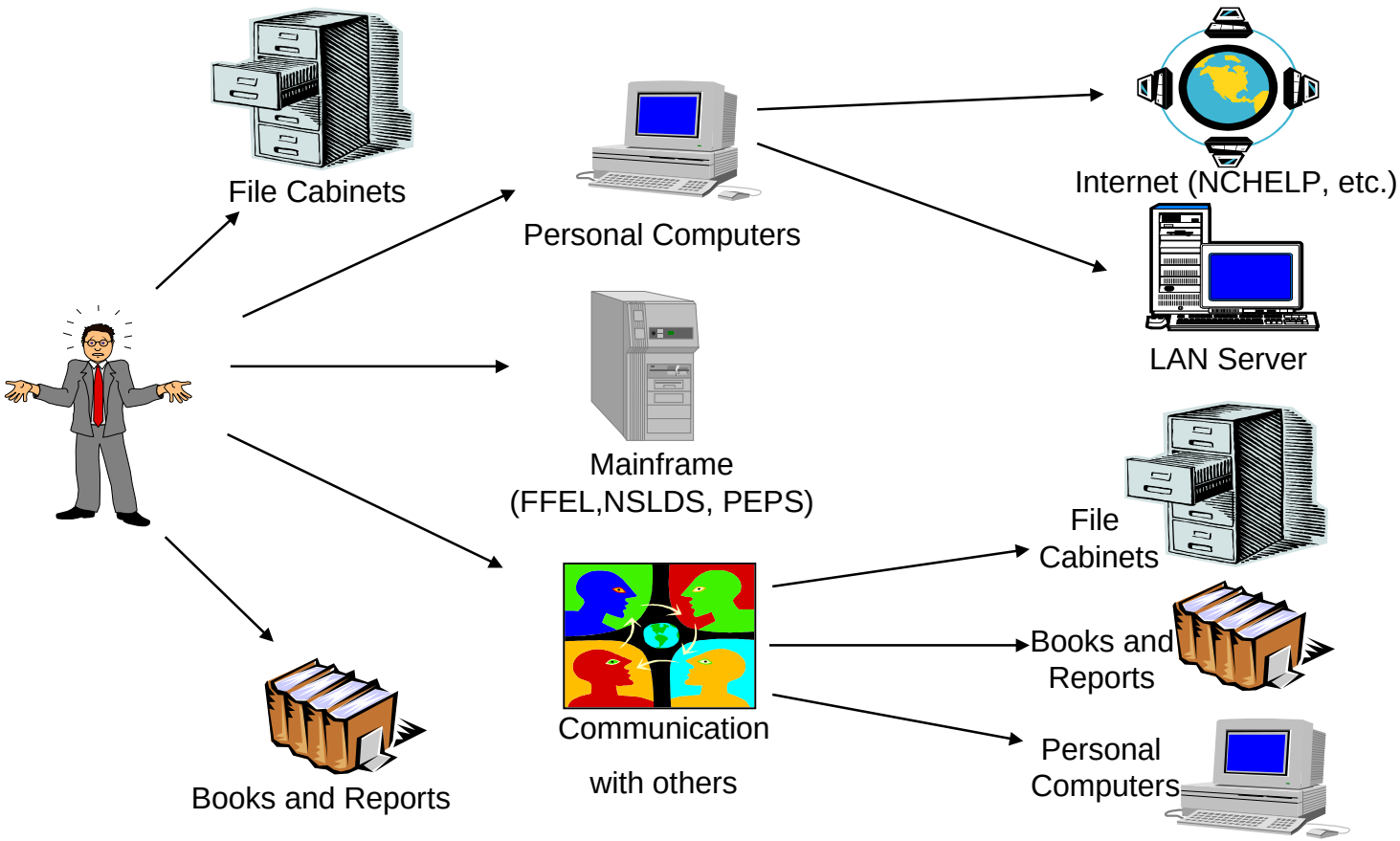
Document Management
Business Context - Phased Approach - continued

- The scope for the first phase included several key characteristics, continued
  - Relationship to other FP Channel processes and initiatives
    - Impacts to other processes such as maintaining phone logs and placing items on shared drives
    - Impacts to documents from other FP Channel initiatives (e.g. the GA portion of the FFEL system is moving to FMS so what impact does that have on the need to maintain the FFEL GA system documentation under a document management system)
  - Access will be limited to internal users
- Although all documents used by the FP Channel were documented, only those that displayed the above characteristics were identified as candidates for Phase I.

Document Management
Current Environment

Student Financial Assistance

Currently, there is no common approach for managing the many documents used by the FP Channel.



Document Management
Improvement Opportunities - Objectives

Student Financial Assistance

In order to determine how the FP Channel's practices compared to industry best practices, a comparison between the two was initiated. This comparison also identifies opportunities in which an Imaging and Document Management system can improve the current practices.

The ranking provided indicates the degree to which current FP Channel practices are consistent with industry best practices.

= Current FP Channel practices are consistent with the best practice standard with opportunities for enhancements to fully utilize the capability.

= Current FP Channel practices partially meet the best practice standard with opportunities for improvement in the area.

= Current FP Channel practices are not consistent with best practice standard with major opportunities for improvement in that area.

In summarizing the detailed comparisons, the FP Channel can benefit significantly from implementing an Imaging and Document Management system. It will enable a structured data capture approach and location transparency.

Document Management
Improvement Opportunities - Best Practices

Student Financial Assistance

Best Practice	Current FP Channel Practice	Ranking	Opportunity
Achieve a cross-departmental agreement on the "to be" picture	The FP Channel has identified the requirements for Document Management, but there exists no overall SFA definition for a "to be" platform.	○	The CIO organization may need to consider implementing an E-Document Management System as several channels have requirements for imaging and better management of documents. Since this effort in the FP Channel has identified the most frequently accessed documents, the FP Channel is well positioned for an enterprise wide IPT.
Document management should provide location transparent access to electronic documents	FP Channel personnel must know exact location of document in question, in some cases documents are not found	○	Provide location transparency to personnel who only have to input document selection criteria and the system returns documents meeting that critieria.
A structured data capture mechanism will be used to capture the documents and indexing information	No structured approach exists within Financial Partners for data capture	○	A structured data capture mechanism will provide means of linking documents to provide logical retrievals, e.g. locate all documents for lender identification number (LID) for the past five weeks involving a specific topic

Key:

- ● *Current FP practices correspond with best practices*
- ◒ *Current FP practices partially follow best practices*
- ○ *Current FP practices do not correspond with best practices*

Document Management
Improvement Opportunities - Best Practices - continued

Student Financial Assistance

Best Practice	Current FP Channel Practice	Ranking	Opportunity
Different types of users (internal and external) should be able to access the document management tool	Currently, external users can access Financial Partners information e.g. Dear Partner Letters via the web	◒	Providing external partners access to appropriate information could lead to reduced partner inquiries
A standard process analysis for how the documents are currently created, reviewed, approved, published and archived has been completed (processes can dramatically change when moving to a document management system)	Currently, no standard process exists within the Financial Partners Channel to define the document lifecycle	○	Future phases should include analysis to determine effective document creation, review, approval, publish and archival processes to more effectively organize the document lifecycle process within Financial Partners
Prepare for the use of workflow functionality if documents trade hands within the organization (e.g., staff completes, supervisors review, managers approve)	Currently, no automated workflow functionality exists within Financial Partners	○	Future phases should investigate workflow opportunities

Key:

- ● *Current FP practices correspond with best practices*
- ◒ *Current FP practices partially follow best practices*
- ○ *Current FP practices do not correspond with best practices*

Document Management
Functional Requirements - Approach

Student Financial Assistance

In order to document the functional requirements, knowledgeable personnel from the different areas were identified and a common approach was followed.

- The approach to collect the functional requirements involved:
  - identifying a subject matter expert (SME) for each area and having them participate on the team
  - developing a detailed spreadsheet for each area to collect information pertaining to its business functions and each document actually used in support of the business function
  - working with others in their area, the SME identified the documents that were used
  - verifying and validating the information on the spreadsheets with other team members
  - identifying “best in business” processes and practices

- The areas reviewed within the FP Channel and their subject matter experts included:

– Partner Services	Merecedes Zajicek
– Financial Management	Tony Magro
– State Agency Liaison	Greg Gerrans
– Program Development	Courtland Smith
– Partner Systems Liaison	Emanuel Bundy, George Allen
– General Manager	Courtland Smith

Document Management
Functional Requirements - Summary Requirements

Student Financial Assistance

Upon reviewing the detailed information related to each document and in additional discussions, the documents identified for Phase I may be summarized by the following.

- Ownership - an owner should be identified for each document. The owner will have the final decision on issues such as retention, deletion of linked documents, etc...
- Media (ongoing) - 28% of the documents are currently not in some form of electronic format. These paper based documents have a low volume - for each document the FP Channel receives less than 30 of the documents per week. Therefore, on-going imaging needs are minimal.
- Media (initial conversion) - There are several instances where the location of the electronic version of the document that matches the final paper version of the document is unknown. This is especially the case with the GA and Lender review folders. For these instances, it is most appropriate to image the information in the GA and Lender folder so that the information will be available in an electronic format for reference purposes.

Document Management
Functional Requirements - Summary Requirements - continued

Student Financial Assistance

- Access - documents will need to be accessible to multiple users and groups of users within the FP Channel as well as to external partners. These documents should be accessible via the LAN or through the internet via a portal.

- Version Control - original versions and modifications/update of the documents should be maintained.

- Security - some documents will be for internal use only and some will be available to the external partners. In addition, documents related to a specific external partner should not be available to other external partners.

- Retention - some documents may need to be retained up to 20 years.

- Flexibility for future considerations - documents should not be 'tagged' as belonging to a certain function or channel as functions may move with organization changes.

- Legal implications - some documents may have legal implications such as the contracts.

Detail information on each document is included in Appendix A.

Document Management Functional View

Student Financial Assistance

Financial Partners

Guaranty Agencies

Correspondence
- Letters
- Email
- Electronic
- Inquires

Lenders

Enterprise Imaging and Document Management System

Links (Future Phase)

Financial Partners Channel

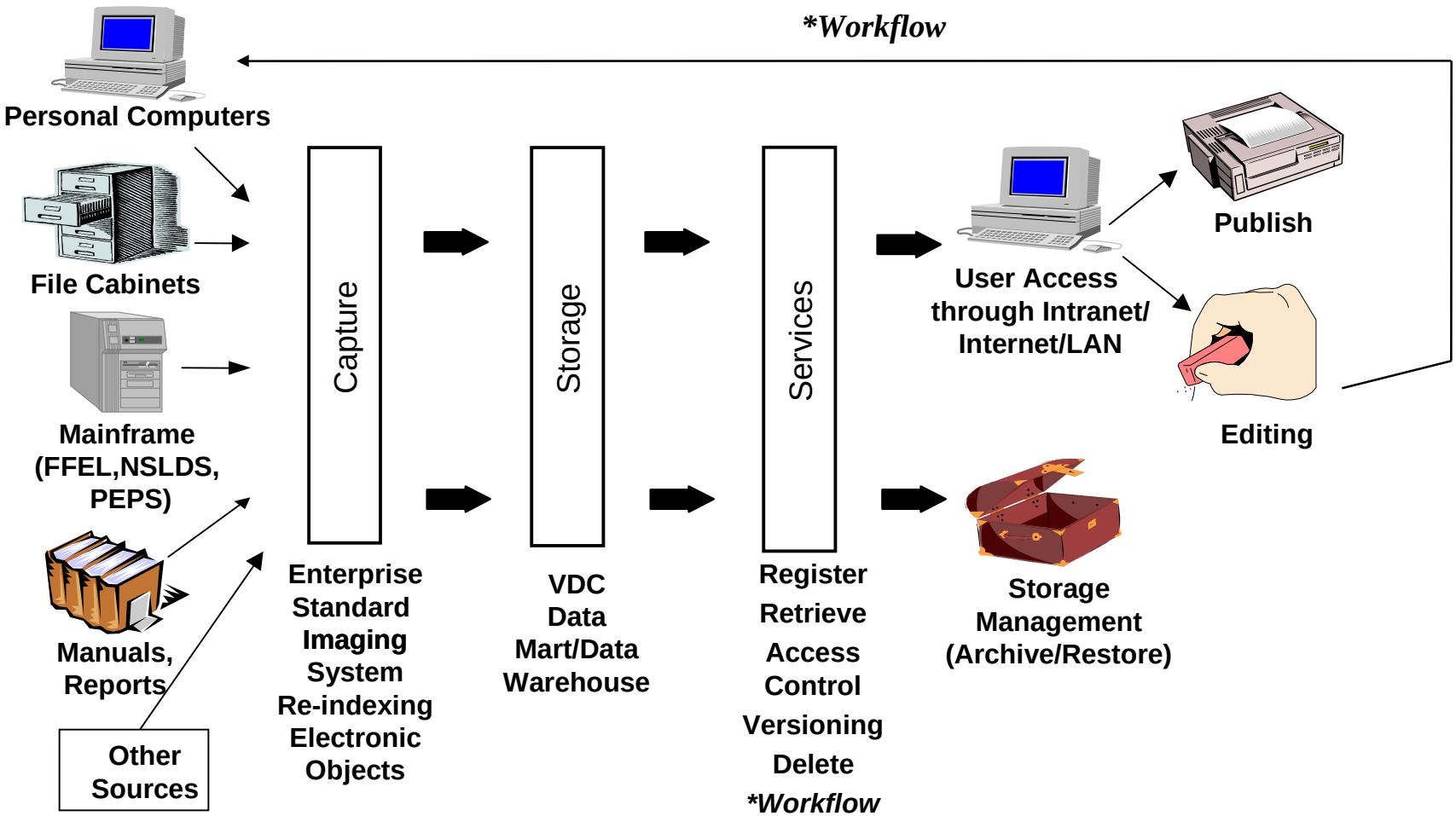
Reviews and Findings

GA and Lender Reviews:
- Performance Reviews
- Audits (Compliance and Financial)

Other External Information:
- Media
- Legislation
- Industry Associations

Document Management Conceptual Model

Student Financial Assistance



*Future Phase

Document Management
Technical Requirements - Overall Considerations

Student Financial Assistance

To support the business and functional requirements, there are several areas which require additional technical consideration.

- Access - appropriate configuration of the document management system should allow documents to be viewed via the LAN or through the internet using a portal.
- Version Control - the repository should contain completed documents and documents that are in process. Once a document is marked as 'final' it should not be modifiable; however, the user may create a copy and store it as the next version.
- Security - current and future security access levels should be supported/developed to prevent unauthorized access to documents from both internal personnel and external partners.
- Retention - documents created in third party tools (e.g. MicroSoft Word) should be retrievable and viewable regardless of the version under which they were created.
- Availability - at a minimum, access to the documents must be available during normal business hours.

Document Management
Technical Requirements - Overall Considerations - continued

- Response Time - appropriate indexes should be established to allow for appropriate response time for document searches, given the complexity of the search.
- External Links - links to documents created externally to SFA (e.g. legislation) should be accessible and the linked information should be considered when conducting a search (a requirement for a future phase).
- Deletion/Archival - removal of documents after their useful life should be automatic based upon pre-defined criteria. Links between documents must be considered when developing the deletion/archival requirements.
- Imaging - a method to create electronic versions of paper based documents should be robust and flexible to support the volumes for the initial capture of documents. Many documents that may need to be imaged are located in the regional offices.
- Enterprise wide solution - the functional and technical requirements to support the FP Channel are common enough that they do not warrant a specific system for the FP Channel.

Document Management
Technical Requirements - Training

Student Financial Assistance

In order to effectively use any new system or approach, the personnel using that system must receive appropriate training.

- Document capture
  - For high-volume capture a contracted source may be utilized to improve throughput and reduce costs: minimal training required for SFA interface personnel for oversight and coordination of contractor activities (process and administration type training vs functional training).
  - Limited personnel within each region will require training to support the needs in that specific region.
- Document storage
  - A contracted source may be utilized to ensure documents are stored correctly (e.g. legible and readable, proper location) when received from the high volume data capture. Minimal training will be required for SFA personnel in their oversight role.
  - Limited internal resources may be utilized in headquarters and in the regions for lower volume documents. These individuals will require training in the proper procedures and use of tools.
- Document services
  - The majority of users will receive training in this area.
  - FP Channel employees will require training in retrieval and versioning services and later in the workflow component.
  - CIO employees will require training in registering, access control, delete, and workflow components in support of the FP Channel.

Document Management
Implementation Strategy - Benefits

Student Financial Assistance

Using a phased approach will allow the FP Channel to recognize substantial benefits earlier in the process. Expected benefits from Phase I may include the following.

- Improve Customer and Employee Satisfaction
  - Ability to locate all documents related to a specific search criteria regardless of the method/tool used to create the document
  - Ability to access documents in a timely manner
  - Ability to access documents created in other regions
  - Ability to provide consistent responses to similar questions
  - Ability to better serve the Financial Partners
- Reduced Unit Cost
  - Reduce need to have or create multiple copies of paper based documents
  - More efficient use of personnel time when responding to Financial Partner inquiries

Document Management
Implementation Strategy - Approach

Student Financial Assistance

The CIO Organization may need to consider an E-Document Management System (including imaging, COLD, OCR, and scanning) as a cross channel enterprise technology.

- Several Channels have requirements for imaging and document management systems. Some Channels have existing imaging systems and at least one Channel has plans to upgrade their current imaging system. An Enterprise-wide solution would allow for consistency across the Channels.

- Using the work completed in this project, the FP Channel is well positioned to participate on an Enterprise-wide Imaging and Document Management IPT. As the documents identified in this initial requirements phase are being implemented into the document management system, the FP Channel can then focus on being able to link to documents that were not created in the FP Channel (or even by SFA) and the more complex workflow component of the document management system.

- The FP Channel has other initiatives that may impact the need to have some documents managed by the document management system. Current initiatives that may have an impact include the re-engineering efforts, risk modeling, and data warehouse.

Document Management
Implementation Strategy - Next Steps

Student Financial Assistance

There are several steps that the FP Channel can immediately implement in order to better position itself for implementing a document management system.

- Identify an owner and contact person
  - the owner will be responsible for establishing a centrally located repository of electronically based documents (e.g. establishing the file structure)
  - a contact person from each region and from each director's area within headquarters will work with the owner to copy all identified documents to the central location
- Communicate that an effort is underway to move toward a document management system
  - Publicize using the Intranet
  - Outreach via direct communication (telephone or face to face) to solicit feedback and recommendations from other staff in FPC units
- Develop procedures in support of a document management system
  - Establish templates for different types of documents
  - Begin using the new templates to capture information
  - Identify the location of all documents that will need to be imaged so that they may be imaged when a standard imaging system is identified and installed
  - Establish procedures to create new documents in the identified location
  - Establish procedures for the GAs/Lenders/Servicers to send electronic versions of all documents

Overview

Data Mart

Document Management

Middleware

Appendix A

Common Third Party Interfacing (Middleware) Business Context - Overview

Student Financial Assistance

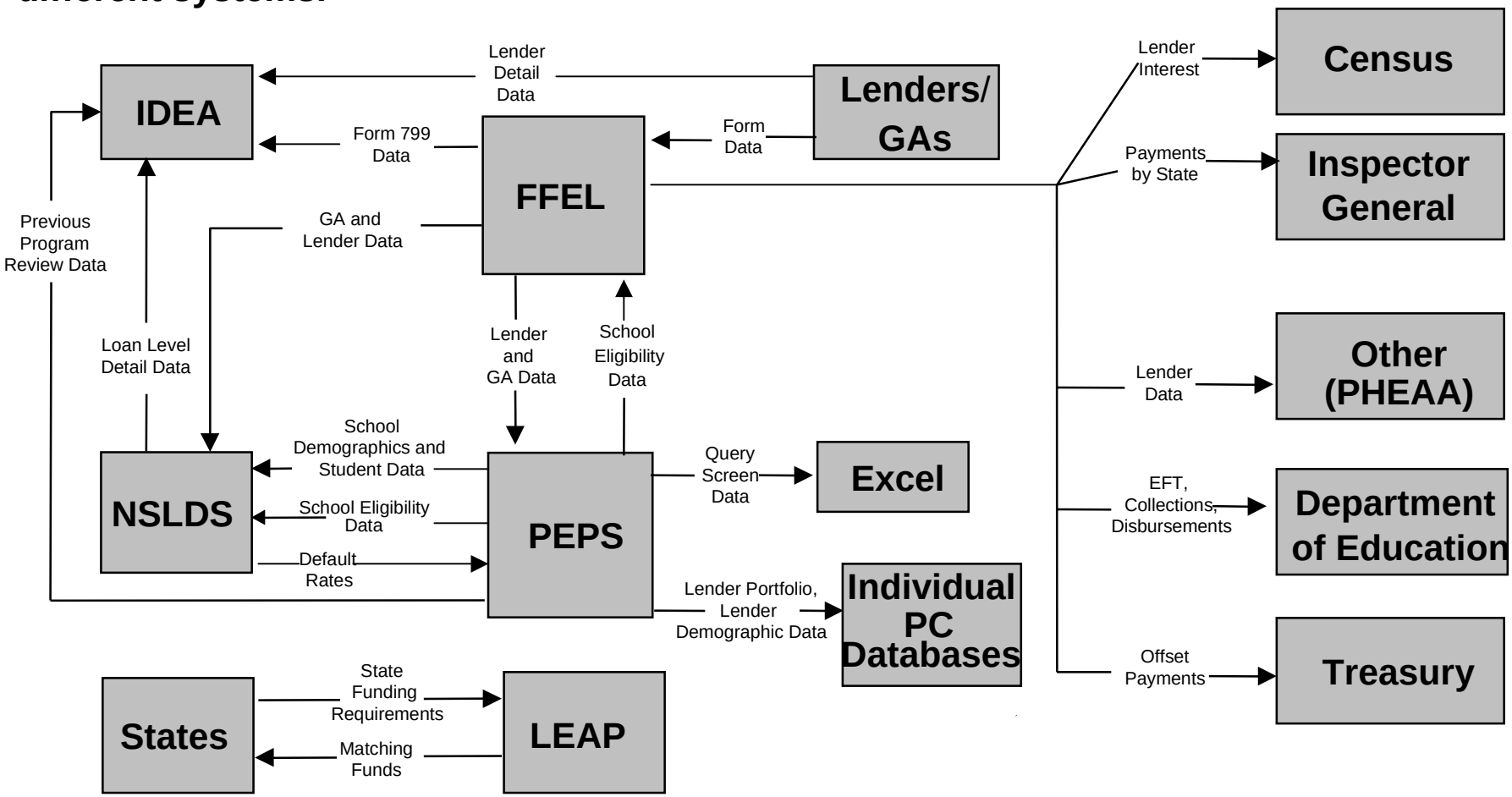
The Financial Partners Channel initiated a project to explore the need for a common platform that will provide standard interface capabilities for all third party affiliates of the Financial Partners Channel and the feasibility of implementing one.

- There are two components to this project:
  - interfaces with the external third parties (e.g.: GAs, Lenders, Servicers, etc.)
  - interfaces to and from SFA's internal computer systems that support the FP Channel's business functions (e.g. between FFEL, PEPS, NSLDS, etc.).
- The Common Third Party Interface (Middleware) team focused on the interfaces with the external partners.
- In order to effectively support this concept of Middleware to the external partners, the relationships between the FP Channel's internal computer systems needed to be examined first.

Common Third Party Interfacing (Middleware) Current Environment

Student Financial Assistance

In the current environment, there are many point-to-point interfaces between the different systems.



Common Third Party Interfacing (Middleware) Functional Requirements - Approach

Student Financial Assistance

In order to document the functional requirements, a common approach was followed.

- The approach to collect information on the system interfaces involved:
  - identifying FP Channel systems which includes regularly used spreadsheets and individual PC databases
  - identifying interfaces from reviewing system documentation
  - verifying information with other documentation
  - verifying information with knowledgeable system personnel

- The personnel consulted included:
  - Frank Miller
  - Steve Martus
  - Calvin Whitaker
  - Donette Crone
  - Mike Fickinger
  - Courtland Smith
  - Greg Gerrans

Common Third Party Interfacing (Middleware) Functional Requirements - Approach - continued

Student Financial Assistance

Multiple systems within and outside the FP Channel are used to support the business functions of the FP Channel.

- FFEL - Federal Family Education Loan has four components:
  - Debt Management Collection System (DMCS) which supports assignment, collection activity, record maintenance and reporting of various outstanding debts
  - Lender and School System which supports the calculation of interest benefits and special allowance requests submitted by participating lenders and the processing of federal claims and loan assignment.
  - Guaranty Agency System which supports collection and processing of guaranty agency portfolio data
  - Support and Maintenance System which comprises the various project level support and maintenance programs and activities such as accounting interface for FFEL financial reporting to the Department's financial ledger system, Quality Control, Management Reports and Invoicing.
- FMS (Proposed release: October 2000) - Oracle-based Financial Management System that supports Student Financial Assistance. It supports Oracle General Ledger, Accounts Receivable and Accounts Payable for Federal Family Education Loan Program Guaranteed Loan - Guaranty Agency Payments Program and LEAPP.

Common Third Party Interfacing (Middleware) Functional Requirements - Approach - continued

- PEPS - Post Secondary Education Participants System is designed to provide a management information system with consistent and reliable data and flexible reporting concerning post-secondary institutions, accrediting bodies, state licensing agencies, lenders, and guarantors, for a large number of users with diverse business needs.

- NSLDS - National Student Loan Data System is a national database of loan and grant-level data on the majority of the Title IV programs.

- LEAP/SLEAP - These programs make federal funds available to states to encourage state education student assistance programs.

- IDEA - This is an audit software program, based on a COTS package, which combines database and spreadsheet functionality to import data from external sources.

Common Third Party Interfacing (Middleware) Functional Requirements - Approach - continued

- Spreadsheets - Microsoft Excel spreadsheets contain data extracted from PEPS query screens. Extracts are created and loaded into the spreadsheets because the PEPS query screens do not have record sorting capability.

- Individual PC databases - A dBase system uses data from FFEL to maintain the Audit Tracking System and produces such statistics as for the top 100 lenders - original loans, and the top 100 lenders - outstanding balances. This dBase system has functionality not currently support by PEPS.

Common Third Party Interfacing (Middleware) Functional Requirements - Approach - continued

Student Financial Assistance

Multiple interfaces between computer systems exist within the FP Channel. The following explanations were used to determine the types of interfaces that needed to be identified.

- Passing information between the FPChannel portion of a system and the non-FP Channel portion of a system (such as exists between the GA and Lender parts of FFEL and the DMCS part of FFEL as well as anything that passes between the FP Channel used portion of PEPS and the Schools' Channel used portion of PEPS)
- Creating an extract from a FPChannel system and then sending that information somewhere else (such as to another FP Channel system, including spreadsheets and individual PC databases, or to another Channel's systems, including NSLDS)
- Obtaining an extract from a non-FP Channel system and then receiving that information into a FPChannel system (such as an extract from NSLDS or FMS that is entered into spreadsheets and used by the FP Channel).

Common Third Party Interfacing (Middleware) Functional Requirements - Detail Information

Student Financial Assistance

In addition to identifying the interfaces, a determination of the future need for those interfaces was determined.

Initiating System	Receiving System	Information transmitted	Frequency	Recommendation
PAS (ED's financial management section)	FFEL (SBL)	4 separate interfaces: (1) CAN file (diskette) (2) TC Table File (diskette) (3) General Ledger file (diskette) (4) FIS file (diskette)	on request	Continue the interface until Lender functionality is supported by FMS. At which time, the interface becomes the responsibility of the Students Channel. An interface is required between ED and FMS to support this information for the GA s and later the Lenders.
PEPS	FFEL (SBL)	school type file	on request	Continue the interface as this information is currently not planned to move to FMS or Financial Partners data mart.
FFEL (SBL)	Financial Partners users	Customer requested information that is downloaded to a PC	on request	Continue the interface until Lender functionality is supported by FMS. At which time, the interface will no longer be necessary. Information may be extracted from FMS for the GA s and later the Lenders using the ad hoc reporting tools in FMS.
FFEL (FIS)	FFEL (CRM)	MIDAS financial transactions (subledger file)	twice weekly	Continue the interface until Lender functionality is supported by FMS. At which time, the interface becomes the responsibility of the Students Channel.
Treasury	FFEL (L-INT)	Batch update of interest payments table	weekly	This interface will cease to function by the end of September 2000. Functionality will be performed by Treasury Dept. Verify Treasury implementation and then stop supporting this interface
FFEL (L-INT)	Treasury	Treasury offset return tape	weekly	This interface will cease to function by the end of September 2000. Functionality will be performed by Treasury Dept. Verify Treasury implementation and then stop supporting this interface
NSLDS	FFEL (L-INT)	2 separate interfaces: (1) NSLDS Aggregate Tape (2) NSLDS Aggregate file interest payments database merge file extract	quarterly	Continue the interface until the Lender functionality is supported by FMS and there is an FP Channel data mart. At which time the information may be retrieved from the data mart.

Common Third Party Interfacing (Middleware)
Functional Requirements - Detail Information - continued

Student Financial Assistance

Initiating System	Receiving System	Information transmitted	Frequency	Recommendation
FFEL (L-INT)	NSLDS	2 separate interfaces: (1) Interest payments table 17 file (2) Interest payments table 30 file (EFT)	quarterly	Continue the interface until the Lender functionality is supported by FMS. An interface to NSLDS containing some of this information may still be required from FMS as part of the Lender Extension. In addition, some of the information from FMS may be extracted and placed in the FP Channel data mart to support ad hoc queries.
FFEL (L-INT)	Census	Summary of Interest Payments, by State	Annually, upon-request	Continue the interface until the Lender functionality is supported by FMS. An interface containing some of this information (or an ad hoc query) may still be required from FMS as part of the Lender Extension.
FFEL (L-INT)	Inspector General	Summary of Interest Payments, by State	Annually, upon-request	Continue the interface until the Lender functionality is supported by FMS. An interface containing some of this information (or an ad hoc query) may still be required from FMS as part of the Lender Extension.
FFEL (GAF)	ED users	Dump of 1189 data	on request	This interface should be discontinued. The information extracted may be obtained from ad hoc queries within FMS or from the FP Channel data mart.
FFEL (GAQ)	Dept of Ed users	3 separate interfaces: (1) Form 1130 Part C (2) Form 1130 Part F (3) Form 1130 extract records	on request	This interface should be discontinued. The information extracted may be obtained from ad hoc queries within FMS or from the FP Channel data mart.
FFEL (SAL)	PHEAA and other recipients	Lender demographic data updates	monthly	Continue the interface until the Lender functionality is supported by Financial Partners data mart.
Lenders	FFEL (L-INT)	2 separate interfaces: (1) Form 799 (interest due) (2) Form 799 received via EDI data	quarterly	Continue the interface until the Lender functionality is supported by FMS.
FFEL (N-UTIL, S-UTIL)	EDCAPS	Lender/GA checks, electronic funds transfers, accounting for collections and disbursements	twice weekly	Continue the interface until the Lender functionality is supported by FMS. An interface supporting the GA s should already be in place in FMS.

Common Third Party Interfacing (Middleware)
Functional Requirements - Detail Information - continued

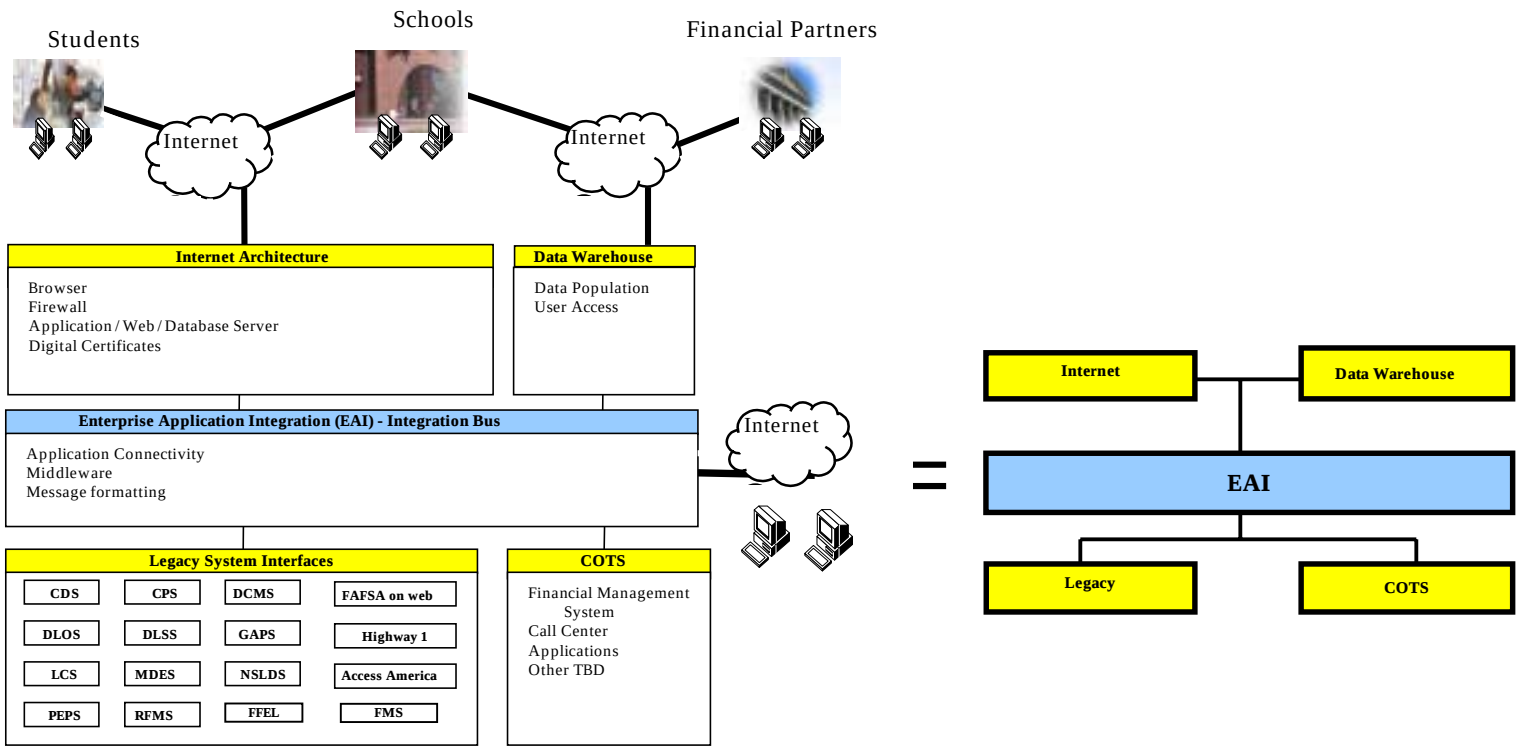
Student Financial Assistance

Initiating System	Receiving System	Information transmitted	Frequency	Recommendation
FFEL (N-UTIL, S-UTIL)	PEPS	2 separate interfaces: (1) Lender Demographic Data, Lender Master File Extract (2) Lender portfolio data	Upon Request	Continue the interface until the Lender functionality is supported by Financial Partners data mart or FMS.
FFEL (N-UTIL, S-UTIL)	Financial Partners users	2 separate interfaces: (1) Lender Demographic Data, Lender Master File Extract (2) Lender portfolio data	Upon Request	Continue the interface until the Lender functionality is supported by Financial Partners data mart or FMS.
FFEL (N-UTIL, S-UTIL)	Financial Partners Users	GA Quarterly Data Extract	Upon Request	Change the interface to extract information from FMS or use the ad hoc query capability within FMS. This information may be obtained from the FP Channel data mart.
FFEL (S-NSL)	NSLDS	Lender interest payments for NSLDS	weekly	Continue the interface until the Lender functionality is supported by FMS. At which time, the information may be extracted from FMS, by using ad hoc queries in FMS, or by using the FP Channel data mart.

Common Third Party Interfacing (Middleware) Conceptual Model

Student Financial Assistance

From the Enterprise Wide perspective, the goal of Middleware is to simplify and standardize the interfaces between computer systems.



Common Third Party Interfacing (Middleware) Technical Requirements - Overall

Migrating the interfaces identified in the Functional Requirements section is heavily dependent upon the existence of the Enterprise Application Integration (EAI Middleware) technical architecture.

- The EAI Middleware technical architecture must be available and tested.
- The initiating and receiving systems must be able to work with the EAI Middleware technical architecture. Considering the age of some of the existing systems, this may be difficult.
- The approach for using the EAI Middleware technical architecture must be clearly defined.

Common Third Party Interfacing (Middleware) Implementation Strategy - Approach

Student Financial Assistance

The current and planned modernization efforts must be considered when determining the approach for implementing Middleware within the FP Channel.

- Interfaces that provide information to download onto PCs for further manipulation may no longer be required if a data mart is implemented within the FP Channel or when the Enterprise Wide data warehouse is available.

- Interfaces that provide information between two systems may need to be changed or eliminated if either the receiving or initiating system is changed or eliminated.

- Considering the amount of effort that will be required to modify the interfaces, they should not all be modified at once. The initial phases of the FP Channel's implementation of Middleware should coincide with other changes being applied to the systems. If there are instances where neither the receiving nor initiating systems will be changing within the next five years, then modifying the interfaces between these systems should be scheduled as priority dictates - after the technical architecture is available.

Overview

Data Mart

Document Management

Middleware

Appendix A